ORIGINAL

0000018912

30A

MEMORANDUM

Arizona Corporation Commission
DOCKETED
APR 13 2005
DOCKETED BY RV

AZ CORP COMMISSION
DOCUMENT CONTROL

2005 APR 13 A 9:40

RECEIVED

To: Docket Control

From: Ernest G. Johnson, Director
Utilities Division

Date: April 13, 2005

RE: **AMENDMENT TO STAFF REPORT**

JOHNSON UTILITIES COMPANY
APPLICATION FOR AN EXTENSION OF ITS CERTIFICATE OF CONVENIENCE AND NECESSITY TO PROVIDE WATER AND WASTEWATER SERVICE IN PINAL COUNTY
DOCKET NO. WS-02987-04-0288

Background

Pursuant to a Data Request, Johnson Utilities provided on January 21, 2005, a list of wells and the water production for each well. The data response is attached as supplemental information "A". The well list from the data request is transcribed in Table I below. ("PWS ID No." means public water system identification number, which is a state and federal designation, unique to the water system.) Based on the water use data from the January 21st response, Staff concluded that Johnson Utilities had insufficient capacity to serve the Johnson Ranch water system (PWS ID No. 11-128).

Table I
Original List of Active Johnson Utility Wells
For PWS ID No. 11-128

DWR Well #	Well Name	DEQ Approval To Construct	DEQ Approval of Construction	Production gal/min
55-599386	Circle Cross	22 Nov 02	22 Oct 04	890
55-558445	Johnson Ranch #4	21 Apr 98	18 May 99	500
55-559843	Johnson Ranch #5	21 Apr 98	24 Jan 02	500
55-621462	Skyline	4 Dec 02	20 Aug 03	650
55-582085	Oasis #1	7 Aug 02	13 Dec 02	110
55-582087	Oasis #2	7 Aug 02	13 Dec 02	110
55-582088	Oasis #3	7 Aug 02	13 Dec 02	110
TOTAL				2,870 gal/min

On January 28, 2005, Johnson Utilities responded to the insufficient capacity conclusion by explaining that the January 21st list only included wells which were actually in use, Other domestic wells, which were connected to the system but on standby due to decreased winter demand, were not reported. The additional wells were then added to the well list. That response is included as supplemental information "B".

Staff then inspected the various well sites on February 2, 2005

Johnson Utilities also responded on February 23, 2005, with a list of all the wells in service, equivalent to the January 28, 2005 list. That February 23rd data response is attached as supplemental information "C", and Table II, below, shows a list of active wells, which are transcribed from the February 23rd response. It can be readily seen that Table II is the same as Table I except for the addition of three wells. Based upon the February 23rd response, the Staff Report reflected that Johnson Utilities had sufficient well capacity in system # 11-128.

Table II
Second List of Active Johnson Utility Wells
For PWS ID No. 11-128

Well #	Well Name	DEQ Approval To Construct	DEQ Approval of Construction	Production gal/min
55-599386	Circle Cross	22 Nov 02	22 Oct 04	890
55-558445	Johnson Ranch #4	21 Apr 98	18 May 99	500
55-559843	Johnson Ranch #5	21 Apr 98	24 Jan 02	500
55-621462	Skyline	4 Dec 02	20 Aug 03	650
55-582085	Oasis #1	7 Aug 02	13 Dec 02	110
55-582087	Oasis #2	7 Aug 02	13 Dec 02	110
55-582088	Oasis #3	7 Aug 02	13 Dec 02	110
SUBTOTAL				2,870
55-586189	Edwards Rd #2	20 Sep 01	23 Jul 02	disconnected
55-627105	Johnson Ranch #3	21 Apr 98	not found	500
55-562385	Johnson Ranch #7	not found	not found	900
TOTAL				4,270 gal/min

In the interim, Staff had several communications with the Arizona Department of Environmental Quality (DEQ) concerning a pending inspection report. During those conversations, Staff inadvertently learned that the wells inspected in January by DEQ corresponded exactly to the well list in Table I. Additionally, DEQ personnel could not locate an "Approval of Construction" (which is essentially an authorization to operate the well), for Johnson Ranch Wells # 3 and # 7 and could not locate an "Approval To Construct" for Johnson Ranch Well #7. Copies of well approvals, which DEQ could locate, are attached as supplemental information "D".

In response to further Staff data requests, Johnson Utilities submitted a copy of an "Approval To Construct" for San Tan Heights #2 well, Arizona Department of Water Resources, ("DWR") # 55-598836. The Company's response was submitted on March 29, 2005, and the San Tan well was approved for construction on March 24, 2005. The DWR well permit indicated a maximum pumping capacity of 710 gal/min. There is yet no DEQ authorization to operate the San Tan well due to high nitrates.

Analysis

Based on initial water use data supplied by Johnson Utilities, Staff calculated that the average daily demand during the peak month was 417 gal/day-service, and estimated that the water demand on the annual peak day would be about 521 gallons/day-service. The Company reported 8,508 actual customers ending December 2004, and recent data shows a growth rate of about 6% per month. Using these numbers, the water production necessary to meet the annual peak day, is shown in Table III. This is the absolute minimum need and assumes that all wells run 24 hours per day and that no wells are out of service for pump replacements or repairs. Work papers for this calculation are included in supplemental information "E".

Table III
Johnson Utilities, PWS ID No. 11-128
Water Demand on Annual Peak Day

	Customer base (estimated beyond Dec)	Peak day demand (gal/min)	Average daily demand during peak month (gal/min)
Dec 2004	8,508	3,078	2,462
Jan 2005	9,018	3,262	2,610
Feb 2005	9,560	3,459	2,767
Mar 2005	10,133	3,666	2,933
Apr 2005	10,741	3,886	3,109
May 2005	11,386	4,119	3,295
Jun 2005	12,069	4,367	3,494

Since the approved wells only produce 2,870 gal/min, it can be seen that presently Johnson Utilities, #11-128, has insufficient capacity to meet its peak day demand, which occurs during the summer.

Recommendations

For the issuance of Certificates of Convenience and Necessity, Staff seeks to answer the question:

> *"Can the utility now meet the service demands of its existing customer base and the demands of the proposed customer additions, or as an alternative, can it now meet the service demands of its existing customer base and can it be reasonably expected that the utility can develop the future required resources and has the performance history to warrant belief that it will develop the future required resources?"*

The appearance that Johnson Utilities has not developed water production resources to meet the pace of its growth, casts doubt on the ability and performance of the utility to meet its needs for new service areas.

Therefore Staff recommends the following (in addition to the recommendations contained in its original Staff Report):

1. Staff recommends that the Commission issue, pursuant to A.R.S. §40-282(D), an "Order Preliminary" to the issuance of the ultimate CC&N to Johnson Utilities.

2. Johnson Utilities shall not construct any water distribution mains or any sewage collection mains within the CC&N extension areas defined by this docket, nor shall Johnson Utilities provide any water and sewer services within the CC&N extension areas defined by this docket, until and after the issuance by the Commission in this Docket, of a subsequent "Final Order", which approves a final CC&N.

3. Staff recommends that Johnson Utilities shall be required to demonstrate to the satisfaction of the Commission, and make this demonstration prior to the issuance of a final CC&N, that the company can meet the water production needs in PWS #11-128 for its current customer base at the time of the demonstration. Johnson Utilities shall also demonstrate to the satisfaction of the Commission that it can continue to develop water production resources to meet the system needs within a reasonably foreseeable future. Such a demonstration should include a list of pending or future wells, their anticipated production capacity in gal/min, and a time schedule for DEQ approval of construction and operation.

4. Under the Order Preliminary concept, after Johnson Utilities has filed proof that the conditions in recommendation #3, above, have been met, the Commission will be requested at a subsequent Open Meeting to approve the extension of Johnson Utilities CC&N in the areas defined by this docket (-04-0288)

Service List for: Johnson Utilities Company
Docket No. WS-02987A-04-0288

Mr. Brian P. Tompsett, P.E.
Johnson Utilities Company
5230 East Shea Boulevard
Scottsdale, AZ 85254

Mr. Jay L. Shapiro, Esq.
Fennemore Craig
3003 North Central Avenue – Suite 2600
Phoenix, AZ 85012

Sheryl A. Sweeney, Esq.
Ryley Carlock & Applewhite
One North Central Avenue - Suite 1200
Phoenix, AZ 85004

Mr. Christopher C. Kempley
Chief, Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

Mr. Ernest G. Johnson
Director, Utilities Division
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Supplemental Information

A

(Inorganic analyses omitted)

JOHNSON UTILITIES COMPANY L.L.C

5230 East Shea Boulevard * Scottsdale, Arizona 85254
PH: (480) 998-3300; FAX: (480) 483-7908

January 21, 2005

Mr. Lyndon Hammon
Engineering Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ. 85007

Re: Data Requests – Docket No. WS-02987A-04-0869

Dear Mr. Chelus:

Per the request of Jason D. Gellman, Attorney for Arizona Corporation Commission, we are submitting our first set of water data sheets and reports.

The reports are for three (3) ADEQ Public Water Systems. These systems are identified as follows:

1.	Johnson Ranch	11-128	*Attachment I
2.	Sun Valley Five	11-116	*Attachment II
3.	Wild Horse	11-245	Attachment III

*Note: We were unable to locate arsenic test results for well #55-573372, #55-559843 and #55-582088. We are submitting samples next week for analysis. Test results are forthcoming.

Information provided for the Water Use Data Sheet reports was provided by:

Gary Larsen, Operations Manager
Johnson Utilities
968 E. Hunt Hwy.
Queen Creek, AZ. 85242

Information provided for the arsenic analysis for each well was provided by:

Frederick A. Amalfi, Ph.D, Laboratory Director
Aquatic Consulting & Testing, Inc.
1525 W. University Drive, Suite 106
Tempe, AZ. 85281

If you have any questions regarding the information on the enclosed reports, please contact me.

Sincerely,

Brian Tompsett, P.E.
Vice President

BT/cg

cc: John Chelus, ACC
Jason D. Gellman, ACC

Johnson Utilities Company
Docket No. WS-02987A-04-0869
ATTACHMENT I

WATER USE DATA SHEET

NAME OF COMPANY	Johnson Utilities
ADEQ Public Water System No.	Johnson Ranch 11-128

MONTH/YEAR (Last 13 Months	NUMBERS OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED	GALLONS PURCHASED
DEC – 2003	4086	30,645,000	31,103,195	
JAN – 2004	4355	20,505,595	20,513,195	
FEB – 2004	4602	31,669,970	32,429,300	
MAR – 2004	4861	25,992,100	26,045,900	
APR – 2004	5747	53,227,135	53,670,800	
MAY – 2004	5944	41,824,840	41,972,500	
JUNE – 2004	6372	81,447,892	82,553,400	
JULY – 2004	6572	81,796,357	81,808,200	
AUG – 2004	8898	35,108,120	36,834,100	
SEPT – 2004	7203	44,239,105	45,318,600	
OCT – 2004	7494	31,954,115	37,955,200	
NOV – 2004	8121	71,122,740	77,015,100	
DEC – 2004	8508	71,677,550	73,924,900	

STORAGE TANK CAPACITY (Gallons)	NUMBER OF EACH	ARIZONA DEPT. OF WATER RESOURCES WELL I.D. NUMBER	WELL PRODUCTION (Gallons per Minute)
500,000	3	55-558445	500
1,000,000	1	55-559843	500
100,000	1	55-621462	650
50,000	1	55-599386	890
		55-582085	110
		55-582088	110
		55-582087	110
			2870

Other Water Sources in Gallons per Minute	GPM
Fire Hydrants on System	YES NO
Total Water Pumped Last 13 Months (Gallons in Thousands)	641,444,390

Johnson Utilities Company
Docket No. WS-02987A-04-0869
ATTACHMENT II

WATER USE DATA SHEET

NAME OF COMPANY	Johnson Utilities
ADEQ Public Water System No.	Sun Valley 5 11-116

MONTH/YEAR (Last 13 Months	NUMBERS OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED	GALLONS PURCHASED
DEC - 2003	76	513,500	515,100	
JAN - 2004	76	535,800	536,000	
FEB – 2004	78	675,100	682,300	
MAR – 2004	78	453,200	461,200	
APR – 2004	76	628,480	643,200	
MAY – 2004	78	854,100	855,700	
JUNE – 2004	82	1,421,880	1,424,100	
JULY – 2004	85	1,234,200	1,235,000	
AUG – 2004	79	876,900	879,200	
SEPT – 2004	78	891,540	891,800	
OCT – 2004	81	972,000	972,200	
NOV – 2004	79	727,590	729,700	
DEC – 2004	71	552,200	555,000	

STORAGE TANK CAPACITY (Gallons)	NUMBER OF EACH	ARIZONA DEPT. OF WATER RESOURCES WELL I.D. NUMBER	WELL PRODUCTION (Gallons per Minute)
500,000	1	55-573272	360
		55-594071	360

Other Water Sources in Gallons per Minute	GPM
Fire Hydrants on System	YES NO
Total Water Pumped Last 13 Months (Gallons in Thousands)	10,380,500

Johnson Utilities Company
Docket No. WS-02987A-04-0869
ATTACHMENT III

WATER USE DATA SHEET

NAME OF COMPANY	Johnson Utilities
ADEQ Public Water System No.	Wild Horse 11-245

MONTH/YEAR (Last 13 Months	NUMBERS OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED	GALLONS PURCHASED
DEC - 2003	53	122,430	122,600	
JAN - 2004	53	139,920	140,200	
FEB – 2004	52	124,800	125,200	
MAR – 2004	51	97,920	98,800	
APR – 2004	51	177,480	178,600	
MAY – 2004	54	163,620	165,100	
JUNE – 2004	57	225,720	226,200	
JULY – 2004	56	268,800	269,800	
AUG – 2004	56	206,640	207,200	
SEPT – 2004	56	178,080	179,400	
OCT – 2004	56	174,720	176,000	
NOV – 2004	56	210,000	210,000	
DEC – 2004	39	119,340	120,200	

STORAGE TANK CAPACITY (Gallons)	NUMBER OF EACH	ARIZONA DEPT. OF WATER RESOURCES WELL I.D. NUMBER	WELL PRODUCTION (Gallons per Minute)
500,000	1	55-571198	360

Other Water Sources in Gallons per Minute	GPM	
Fire Hydrants on System	YES	NO
Total Water Pumped Last 13 Months (Gallons in Thousands)		2,219,300

Supplemental Information

B

JOHNSON UTILITIES COMPANY L.L.C

5230 East Shea Boulevard * Scottsdale, Arizona 85254
PH: (480) 998-3300; FAX: (480) 483-7908

Mr. Lyndon Hammon
Engineering Division
Arizona Corporation Commission
1200 West Washington St.
Phoenix, AZ 85007-2927

RE: Staff's Data Requests for Johnson Utilities Company
Docket Number WS-02987A-04-0869

Dear Mr. Hammon:

Attached to this letter is a revised "Water Use Data Sheet" for the Johnson Utilities Company, System Number 11-128. We apologize for our confusion in filling out this document on the first response. When our personnel filled in the form, they only documented the domestic wells that were currently being utilized for domestic water production. The revised "Water Use Data Sheet" now includes all the wells that are connected to the system, and wells that have been drilled, but have yet to be connected to the system. Specifically the Morning Sun Farms Well, San Tan Well #1 and San Tan Well #2 have been drilled, but are not yet ADEQ approved. These three wells therefore have not yet been connected to the system, but we anticipate approval prior to June 2005. Attached to this letter is the water quality data for San Tan Well #1 and San Tan Well #2. We are still waiting for the test results of the Morning Sun Farms well.

J.R. Well #2 is not currently connected to System #11-128, and will not be connected until that area of Johnson Ranch is developed. It is anticipated that the connection will not be made until sometime after June 2005 and was not included in the flow calculations.

We anticipate that with the addition of the three new wells, we will have a well production capacity of approximately 6,405 gal/min in June 2005.

Johnson Utilities was and is enrolled in ADEQ's MAP program. Attached to this letter are the results of the MAP 2003 program. Per Mr. Scott Steinhagen, of ADEQ's MAP program, no MAP tests were performed or required in 2004. ADEQ's MAP program is scheduled to test POE2 and POE3 of Johnson Utilities System #11-128 in 2005. We have also attached the MAP 2005 schedule of tests as provided by ADEQ.

The arsenic tests for well numbers 55-559843 & 55-582088, although not required by ADEQ, were taken on 1/26/2005. The lab has indicated that we will receive the test results within 5-10 working days from that date. We will forward a copy of those results to you when they become available. We do not anticipate any arsenic problems in this area.

JOHNSON UTILITIES COMPANY L.L.C
5230 East Shea Boulevard * Scottsdale, Arizona 85254
PH: (480) 998-3300; FAX: (480) 483-7908

Thank you for your consideration and time in reviewing this additional information. I f you have any additional questions or concerns please feel free to contact me directly at (480) 998-3300.

Sincerely,
Johnson Utilities Company

Brian P. Tompsett, P.E.
Executive Vice President

Cc: Jay Shapiro (Fennimore Craig)
Jim Fisher (ACC)
Jason Gellman (ACC)

JOHNSON UTILITIES COMPANY
SYSTEM NUMBER 11-128
WELL INVENTORY
As of January, 2005

Well Identification Number	Well Identification Name	G.P.M	SYSTEM I.D. #	STATUS
55-625916	Circle Cross Well (abandon)	n/a	JR 11-128	Abandoned
55-625918	Circle Cross Well (abandon)	n/a	JR 11-128	Abandoned
55-599386	Circle Cross Well	890	JR 11-128	Active
55-621462	Skyline Well	650	JR 11-128	Active
55-586189	Edwards Road Well #2	35	JR 11-128	Active
55-627105	J.R. Well # 3	500	JR 11-128	Active
55-558445	J.R. Well # 4	500	JR 11-128	Active
55-559843	J.R. Well # 5	500	JR 11-128	Active
55-562385	J.R. Well # 7	900	JR 11-128	Active
55-615284	J.R. Well #2	360	JR 11-128	Not Connected
55-201429	Morning Sun Farms Well	800	JR 11-128	Pending
55-582087	Oasis Well # 2	110	JR 11-128	Active
55-582088	Oasis Well # 3	110	JR 11-128	Active
55-582085	Oasis Well #1	110	JR 11-128	Active
55-626147	San Tan Heights # 1	500	JR 11-128	Pending
55-598836	San Tan Heights # 2	800	JR 11-128	Pending

Estimated Existing Production Wells: **4,305** **Gallons/minute (1)**
Pending Production Wells: **2,100** **Gallons/minute(1)**

Total Production Wells as of June 2005: **6,405** **Gallons/minute (1)**

(1) Does not include J.R. Well #2

Johnson Utilities Company
Docket No. WS-02987A-04-0869
ATTACHMENT I

WATER USE DATA SHEET

NAME OF COMPANY	Johnson Utilities
ADEQ Public Water System No.	Johnson Ranch 11-128

MONTH/YEAR (Last 13 Months	NUMBERS OF CUSTOMERS	GALLONS SOLD (Thousands)	GALLONS PUMPED	GALLONS PURCHASED
DEC – 2003	4086	30,645,000	31,103,195	
JAN – 2004	4355	20,505,595	20,513,195	
FEB – 2004	4602	31,669,970	32,429,300	
MAR – 2004	4861	25,992,100	26,045,900	
APR – 2004	5747	53,227,135	53,670,800	
MAY – 2004	5944	41,824,840	41,972,500	
JUNE – 2004	6372	81,447,892	82,553,400	
JULY – 2004	6572	81,796,357	81,808,200	
AUG – 2004	8898	35,108,120	36,834,100	
SEPT – 2004	7203	44,239,105	45,318,600	
OCT – 2004	7494	31,954,115	37,955,200	
NOV – 2004	8121	71,122,740	77,015,100	
DEC – 2004	8508	71,677,550	73,924,900	

STORAGE TANK CAPACITY (Gallons)	NUMBER OF EACH	ARIZONA DEPT. OF WATER RESOURCES WELL I.D. NUMBER	WELL PRODUCTION (Gallons per Minute)
500,000	3	See Attached	
1,000,000	1		
100,000	1		
50,000	1		

Other Water Sources in Gallons per Minute	GPM
Fire Hydrants on System	YES NO
Total Water Pumped Last 13 Months (Gallons in Thousands)	641,444,390

Revised 1/27/2005

SUPPLEMENTAL INFORMATION

C

JOHNSON UTILITIES COMPANY L.L.C

5230 East Shea Boulevard * Scottsdale, Arizona 85254
PH: (480) 998-3300; FAX: (480) 483-7908

February 23, 2005

Mr. Jason D. Gellman
Attorney, Legal Division
Arizona Corporation Commission
1200 West Washington St.
Phoenix, AZ. 85007-2927

RE: Staff's Second Set of Data Requests for Johnson Utilities Company
Docket Number WS-02987A-04-0869

Dear Mr. Gellman:

On February 14, 2005, we received your second set of data requests for Docket Number WS-02987A-04-0869. In response to your requests for additional information, we would like to submit the following:

1. We have attached a list of our current wells, *in service*, with the arsenic test level results. These wells are in compliance with the new arsenic standard of 10 µg/l that will be effective in January 2006.

   The test results were compiled by:

   Gary Larsen
   Operations Manager
   Johnson Utilities
   968 East Hunt Highway
   Queen Creek, AZ. 85242

   Test results for wells marked with * were provided by:

   Frederick A. Amalfi, Ph.D., Laboratory Director
   Aquatic Consulting & Testing, Inc.
   1525 W. University Drive, Suite 106
   Tempe, AZ. 85281

   Test results for wells marked with ** were provided by:

   Lisa Sutherland, Client Services Representative
   Legend Technical Services, Inc.
   17631 N. 25th Avenue
   Phoenix, AZ. 85023

Samples have been drawn for well #55-627105, #55-615286, #55-615284 and #55-582088. We anticipate results within the next 20 days. We will submit the levels upon receipt of the written results from the lab.

2. In regards to the well with the problematic point of entry that will not be in compliance with the January 2006 limits, we will be closing this well and therefore it will not necessitate compliance efforts.

Thank you for your consideration and time in reviewing this information. If you have any additional questions or concerns, please feel free to contact me directly at (480) 998-3300.

Sincerely,
Johnson Utilities Company

Brian P. Tompsett, P.E.
Executive Vice President

cc: John Chelus – (ACC)
Lyndon Hammon – (ACC)
Jim Fisher – (ACC)
Jay Shapiro (Fennimore Craig)

JOHNSON UTILITIES

WELL INVENTORY

As of February, 2005

Well Identification Number	Well Identification Name	Arsenic Level mg/l	POE	SYSTEM I.D. #	STATUS
55-625916	Circle Cross Well			JR 11-128	Abandoned
55-625918	Circle Cross Well			JR 11-128	Abandoned
55-599386	*Circle Cross Well	0.002	#4	JR 11-128	Active
55-621462	*Skyline Well	0.003	#3	JR 11-128	Active
55-586189	*Edwards Road Well #2	0.002	#1	JR 11-128	Active
55-627105	J.R. Well # 3	n/a	#1	JR 11-128	Active
55-558445	**J.R. Well # 4	0.003	#1	JR 11-128	Active
55-559843	**J.R. Well # 5	0.005	#1	JR 11-128	Active
55-615286	J.R. Well # 7	n/a	#1	JR 11-128	Active
55-615284	J.R. Well #2	n/a	n/a	JR 11-128	Not Connected
55-201429	Morning Sun Farms Well			JR 11-128	Pending
55-582088	Oasis Well # 2	n/a	#2	JR 11-128	Active
55-582087	**Oasis Well # 3	0.003	#2	JR 11-128	Active
55-582085	*Oasis Well #1	0.022	#2	JR 11-128	Active
55-626147	*San Tan #1	0.007	#1	JR 11-128	Pending
55-598836	San Tan Heights # 2			JR 11-128	Pending

***Estimated Existing Production Wells: *4,305 gallons/minute (1)**
Pending Production Wells: *2,100 gallons/minute (1)

Total Production Wells as of June 2005: *6,405 gallons/minute (1)

(1) Does not include J.R. Well #2

* Test results submitted by Aquatic Consulting & Testing, Inc.
** Test results submitted by Legend Technical Serices, Inc.

SUPPLEMENTAL INFORMATION

D

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Water Quality Division
3033 N. Central Ave., Phoenix, AZ 85012

APPROVAL OF CONSTRUCTION

JR4

Project Description One new well (DWR #55-558445) and water transmission main for Johnson Ranch water system facility, Phase I, consisting of approx. 1,165 LF of 8" PVC and 5,300 LF of 12" transmission main. ADEQ File #980006

Location Hunt Highway, S. of intersection (County) Pinal
with Bella Vista Rd.

Project Owner Johnson Utilities Co.
5320 E. Shea Blvd.
Scottsdale, AZ 85254

This Approval of Construction is based upon the May 12, 1999 Engineer's Certificate of Completion and accompanying test results submitted by engineer Brian P. Tompsett, P.E. (Certificate No. 27077).

Approval to operate the above described facilities as represented in the approved plan documents on file with the Arizona Department of Environmental Quality is hereby given subject to the following provisions:

1. This approval is only for the use of well #4. Before an approval can be given for wells 3 and 5, data must be provided to show that the nitrate levels for those wells are less than 10 mg/l.

2. Nitrate monitoring shall be conducted from the well monthly for at least one year. If none of the results exceed 10 mg/l, then sampling may be reduced to quarterly.

Arizona Revised Statutes require that the operation of the project must be in accordance with the rules of the Arizona Department of Environmental Quality.

WHS:JHB

System Number not yet assigned

cc: CTEU Facility File, (not yet assigned)
TEU Approval of Construction File
ADEQ TEU File #980006
Pinal County Health Department
Planning & Zoning (Pinal County)
Arizona Corporation Commission
Engineer

5/18/99
William H. Shafer, P.E., Manager
FIELD ENGINEERING/INSPECTION UNIT
WATER QUALITY DIVISION - DRINKING WATER SECTION

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT
WATER FACILITIES

SYSTEM NAME: JOHNSON RANCH WSF-PHASE 1	SYSTEM NO.: NEW
PROJECT OWNER: JOHNSON UTILITIES	
ADDRESS: 5320 E. SHEA, SCOTTSDALE, AZ 85254	
PROJECT LOCATION: FLORENCE	COUNTY: PINAL

DESCRIPTION: THREE NEW WELLS AND WATER TRANSMISSION LINE FOR JOHNSON RANCH WATER SYSTEM FACILITY-PHASE 1. CONSTRUCT APPROXIMATELY 1,400 L.F. OF 8" PVC WATERLINE, 5,000 OF 12" PVC WATERLINE, WELL #3 (#55-627105), WELL #4 (#55-558445), WELL #5 (#55-559).

Approval to Construct the above-described facilities as represented in the approved documents on file with the Arizona Department of Environmental Quality is hereby given subject to provisions 1 thru 5 continued on Page 1 thru 2.

1. Notice shall be given to the Southern Regional Office located in Tucson when construction of the project begins to allow for inspection during construction per A.R.S. Section 49-104.B.10.

2. The project owner shall retain a professional engineer as soon as possible to provide detailed construction inspections of this project. Upon completion of construction, the engineer shall fill out the Engineers Certificate of Completion (attached), and forward it to the Regional Office. If all requirements have been completed the Regional Office will issue a Certificate of Approval of Construction.

3. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department.

The State law, A.R.S. Section 49-104.B.10, requires that construction of the project must be in accordance with rules and regulations of the Arizona Department of Environmental Quality. This certificate will be void if construction has not started within one year of the approval date. Upon request a written time extension may be granted by the department.

Reviewed by: KNS:cae

By: _____ 4/21/98
Wm. H. Shafer, Jr., P.E., Manager Approval Date
Technical Engineering Unit
Water Quality Division

cc: File No.: 980006
Regional Office: Southern
County Health Department: Pinal
Owner: Johnson Utilities
Engineer: Wlb Group
Planning and Zoning/Az Corp. Commission
Engineering Review Database

4. Wells construction shall conform with DWR regulations.

5. This Approval to Construct does not include approval for the connection of the wells to the water system. Approval to connect the wells will not be given until the water treatment (ADEQ File No. 980115) has been approved by ADEQ.

Received by

MAY 12 1999

ADEQ

The WLB Group Inc.

Engineering • Planning
Surveying • Urban Design
Landscape Architecture

May 12, 1999

WLB No. 195071A001

Mr. Jeff Beimer
Arizona Department of Environmental Quality
Drinking Water Compliance & Enforcement Unit Water Quality Division
3033 N. Central Avenue
Phoenix, Arizona 85012

Re: Johnson Ranch Water System Facility - Phase I Approval of Construction

Dear Mr. Beimer:

In response to your letter dated April 15, 1999, regarding Johnson Ranch Water System Facility - Phase I (ADEQ #980006). I will breifly explain and/or supply the data you are requesting. Project No. 980115 (Water Plant No. 1) was submitted under separate cover.

Project # 980006

1. Test results for the 8"and 12" transmission main have been attached. → 3/13/99 test from tank, per discussion w/ Grant on 5/14/99.
2. The Microbiological test results for Well #4 are attached hereto and were sampled at Well site #4 by EUS on March 2, 1999, and was tested by Aquatic Consulting & Testing, Inc. (ACTI). The nitrate/nitrite levels were at 8.5 which is below the 10.0 required by ADEQ.
3. Well Site No. 3 and No. 5 are not a part of this request. These wells will be submitted under separate cover when construction has been completed.

Telemetry system is not installed as yet. The system will be operated manually until the telemetry system is placed on line.

The utility can currently use any of the wells to provide groundwater for the subdivisions.

Sincerely,

THE WLB GROUP, INC.

Grant K. Hinderer
Assistant Project Manager

cc: George H. Johnson (Johnson International)
Paul Hendricks (EUS)
Sean Walters (SunBelt)

W:\195071\ADEQ\BMRLTR5_6_99.wpd

ENGINEER'S CERTIFICATE OF COMPLETION AND FINAL INSPECTION "ECC"

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) - WATER QUALITY DIVISION 6/97

ADEQ FILE NO.: 980006 → ☒ DRINKING WATER DESIGN Check only one → ☐ WASTEWATER DESIGN If separate Drinking Water & Wastewater Approvals to Construct were issued, separate ECCs required	COUNTY: PINAL OWNER: JOHNSON UTILITIES CO.

Project Description: JOHNSON RANCH - WATER SYSTEM FACILITY - PHASE I.
- WELL SITE NO. 4 (# 55-558445): DEVIATIONS AS NOTED.
- APPROX. 1165' 8" TRANSMISSION LINE
- APPROX. 5300' 12" TRANSMISSION LINE

HYDROSTATIC TEST RESULTS INCLUDE A PORTION OF UNIT 4A ADEQ. NO. 980009, BUT IS NOT A PART OF THIS REQUEST.

* NOTE: WELL SITES #3 & #5 NOT INCLUDED IN THIS A.O.C. REQUEST. THEY WILL BE SUBMITTED UNDER SEPERATE COVER.

† ACCURATELY DESCRIBE COMPLETED PROJECT - USE AT LEAST SAME DETAIL AS IN APPROVAL TO CONSTRUCT "PROJECT DESCRIPTION" † (Continue on Reverse, if needed)←

I, BRIAN P. TOMPSETT, a Professional Engineer registered in the State of Arizona, have inspected the ~~construction~~ TEST RESULTS of the above described project, and certify that (*check all applicable boxes, complete applicable blanks*):

ITEMS 1) THRU 4) MUST BE COMPLETED

☐ 1) The work on this project was completed on 5.12.1999 (date).

☐ 2) On 5.12.99 (date) a final construction inspection was conducted by ~~MYSELF~~ [←~~check one~~→] ☒ ~~AT~~ ~~under MY DIRECT SUPERVISION~~ DIRECTION by MORRIS REYNA & DANIEL MAY (print name). (SEE ATTACHED)

☐ 3) The materials utilized and the installation and construction of those materials and equipment are in conformance with the approved plans and specifications and the Arizona Department of Environmental Quality (ADEQ) Certificate of Approval to Construct issued on 4.21.1998 (date in certificate signature block).

☐ 4) All construction and preoperational tests (infiltration, exfiltration, pressure, deflection, chlorination, bacti, etc.) [circle types performed] were properly conducted, met ADEQ requirements, and are represented in attachments to this Certificate. The total number of pages of test results attached is 5.

EITHER 5A) or 5B) MUST BE CHECKED

☒ 5A) Any deviation from the approved plans and the ADEQ Certificate of Approval to Construct have been noted on the attached "~~As-Built~~" AS-CONSTRUCTED plans (as stipulated in the Approval to Construct provisions) prepared and sealed pursuant to A.R.S.§ 32-125 on 3.31.1998 (date). Of the total 10 sheets of "As-~~Built~~" plans attached, deviations from the approved plans are shown on sheets numbered (1-10 OF 10) AS NOTED CONSTRUCTED. All deviations from the approved plans comply with the ADEQ minimum design and construction standards contained in statute, rule, bulletin or referenced codes, and with the key elements of the approved plans.

☐ 5B) The completed project did not deviate from the plans which received the Approval to Construct.

EITHER 6A) or 6B) MUST BE CHECKED

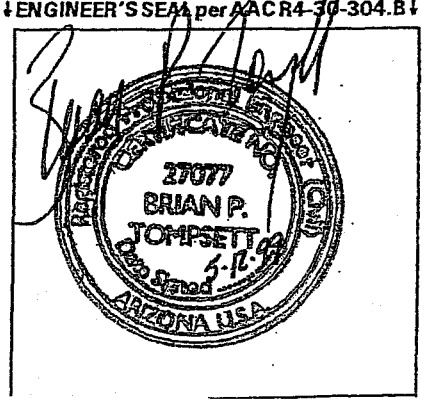
☒ 6A) This project did not require the preparation of an Operation and Maintenance Manual.

☐ 6B) An Operation and Maintenance Manual has been prepared for this project and a copy is attached. This manual meets all ADEQ minimum design and construction standards contained in statute, rule, bulletin, referenced codes, the key elements of the approved plans, and, if applicable, with Attachment B of the September 10, 1994 Engineering Advisory for Individual Alternate Systems.

ADDITIONAL INFORMATION

☐ 7) Other, see additional Information on reverse side.

↓ENGINEER'S SEAL per AACR4-30-304.B↓



Engineer Address THE WLB GROUP - 333 E. OSBORN SUITE #380. PHX. AZ. 85012 Phone (602) 334-3144

AZ DEPARTMENT OF ENVIRONMENTAL QUALITY ACCEPTANCE

EMPLOYEE SIGNATURE (PRINTED NAME) DATE

JOHNSON RANCH - WATER SYSTEM FACILITIES-PHASE 1

WATER PLANS - A.D.E.Q. NO. 980006

ITEMS INCLUDED HEREIN:

Engineer's Certificate of Completion.

Copy of Certificate of Approval to Construct.

Hydrostatic testing

Chlorination and Bacteria Testing.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull John F. Hagen, Acting Director

April 15, 1999

Brian Tompsett, P.E.
The WLB Group
333 East Osborn, Suite 380
Phoenix, Arizona 85012

RE: Approvals of Construction for ADEQ File Nos. 980006 (Well #4), 980009 (Unit 4A), 980011 (Unit 2), 980051 (Unit 3A), and 980115 (Water Plant)

Dear Mr. Thompsett:

The following outlines what is necessary before Approvals of Construction (AOC) can be issued for the above-referenced projects:

Project #980006:

1. An Engineer's Certificate of Completion, pressure test and microbiological test data for the related mains, and any additional nitrate analytical results for well #4 are needed. The AOC will only be issued for the portion of the project that includes well #4. Before an AOC can be issued for wells 3 and 5, a plan must be submitted to and approved by ADEQ which details the proposed modifications to the wells to reduce the nitrate levels below the maximum contaminant level (MCL). Upon completion of the well modifications, an Engineer's Certificate of Completion must be submitted for the balance of the project for wells 3 and 5, and must include pressure test and microbiological test data for all mains not covered by the AOC for well #4, and nitrate analyses which show that the wells comply with the nitrate MCL.

Project #980009:

2. An Engineer's Certificate of Completion and pressure test and microbiological test data for the water mains must be submitted.

Projects #980011 and #980051:

3. Please refer to my correspondence dated March 26, 1999.

Project #980115:

4. All water main pressure test data and microbiological analytical results for this project that were not included in the original AOC submittal are needed.

If you have any questions, feel free to contact me at 207-4646.

Sincerely,

Jeff Beimer
Drinking Water Compliance & Enforcement Unit
Water Quality Division

JHB:jhb

cc: Pinal County

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER QUALITY DIVISION
3033 N. Central Avenue, Phoenix, Arizona 85012

APPLICATION FOR APPROVAL TO CONSTRUCT SANITARY FACILITIES

(PLEASE SUBMIT IN DUPLICATE TO THE ADEQ ENGINEERING REVIEW DESK)

☑ New Public Water Supply ☐ Extension or Modification to Existing Public Water Supply ☐ Time Extension
☐ New Sewage System ☐ Extension of Modification to Existing Sewage System ☐ Other: _____

1. SYSTEM NAME/OWNER ADDRESS/ADEQ SYSTEM NUMBERS:

WATER Johnson Ranch Water System Facility Plan 1 SYSTEM NUMBER ☐☐☐☐☐

SEWER _____ SYSTEM NUMBER ☐☐☐☐☐

ARIZONA DEPT. OF ENVIRONMENTAL QUALITY
JAN - 8 1998
Engineering Review

2. PROJECT LOCATION (approximate center, information is required to accept application):

LATITUDE 33° 09' 00.☐" N LONGITUDE 111° 33' 00.☐" W

TOWNSHIP 3S RANGE 8E SECTION 20 QUARTER SECTION (circle most applicable) (NE) SE SW NW

Postal Zip Code at Plant Site (WWTP Only): _____

OTHER LOCATION DESCRIPTION SOUTH OF BELLA VISTA AND EAST OF HUNT HIGHWAY

COUNTY PINAL

3. PROJECT DESCRIPTION: CONSTRUCT APPROX. 1400 LF OF 8" AND 5000 OF 12" WATER MAIN FOR TRANSMISSION OF WELL WATER TO TREATMENT AND STORAGE FACILITY.

4. PROJECT ENGINEER: WLB GROUP, 333 E OSBORN #380, PHOENIX, AZ 85012 (602) 279-1016
TYPE OR PRINT NAME/MAILING ADDRESS/PHONE NUMBER

5. PROJECT OWNER: JOHNSON UTILITIES, 5320 E SHEA SCOTTSDALE, AZ 85254 (602) 998-3200 X _____ _____
TYPE OR PRINT NAME/MAILING ADDRESS/PHONE NUMBER SIGNATURE DATE

6. PLAN DOCUMENTS SUBMITTED (SEE ADEQ CHECKLIST-SUBMITTAL REQUIREMENTS BY PROJECT TYPE):
Please attach a list of documents submitted with this completed application form.
Beginning December 9, 1996, ADEQ requires a payment of initial fee for certain wastewater project types.
NOTES:
A. INCOMPLETE SUBMITTALS WILL NOT BE LOGGED IN;
B. APPLICATIONS WITHOUT THE INITIAL FEE WILL NOT BE LOGGED IN.

7. AQUIFER PROTECTION PROGRAM INFORMATION (REQUIRED FOR ALL SEWAGE AND SUBDIVISION APPLICATIONS):

AGGREGATED SEWAGE FLOW FOR OVERALL PROJECT _____ GALLONS PER DAY

APP DETERMINATION OF APPLICABILITY FORM (check one): ☐ Not Submitted ☐ Submitted _____.
DATE SUBMITTED

APP APPLICATION FORM (check one): ☐ Not Submitted ☐ Submitted _____.
DATE SUBMITTED

8. OWNER/AGENT AGREEMENT AND SCHEDULE: AGREEMENT-The undersigned as Project Owner or as acting Agent for the Project Owner hereby (a) grants ADEQ permission to enter the site for inspections; (b) authorizes the Project Engineer to prepare and submit plan documents to the ADEQ ENGINEERING REVIEW DESK; and (c) agrees to construct the sanitary facilities according to the ADEQ Certificate of Approval and the approved plan documents.

CONSTRUCTION SCHEDULE-Estimated start date _____ Estimated completion date _____

BRIAN TOMPSETT	WLB GROUP		1.7.1998
TYPE OR PRINT NAME	AFFILIATION	SIGNATURE	DATE
TYPE OR PRINT NAME	AFFILIATION	SIGNATURE	DATE

ADEQ COMPLIANCE EVALUATION:	ADEQ FEE NO: 18666
IN-COMPLIANCE: (W/WW) /	ADEQ SITE CODE:
NON-COMPLIANCE: (W/WW) /	INVNO: (50000 SERIES):
COMMENTS:	INITIAL FEES $:

ADEQ/WQD-114BLUE(REV.12/3/96)

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY / WATER QUALITY DIVISION
3033 N. Central Avenue, Phoenix, Arizona 85012

APPLICATION FOR APPROVAL TO CONSTRUCT SANITARY FACILITIES

(PLEASE SUBMIT IN DUPLICATE TO THE ADEQ ENGINEERING REVIEW DESK)

☒ New Public Water Supply ☐ Extension or Modification to Existing Public Water Supply ☐ Time Extension
☐ New Sewage System ☐ Extension of Modification to Existing Sewage System ☐ Other: _____

RECEIVED
JAN 0 1998
Engineering Review

1. SYSTEM NAME/OWNER ADDRESS/ADEQ SYSTEM NUMBERS:

WATER Johnson Ranch Water System - Facility - Phase 1 SYSTEM NUMBER ☐☐☐☐☐

SEWER _____ SYSTEM NUMBER ☐☐☐☐☐

2. PROJECT LOCATION (approximate center, information is required to accept application):

LATITUDE 33° 09' 00.☐" N LONGITUDE 111° 33' 03.☐" W

TOWNSHIP 3S RANGE 8E SECTION 20 QUARTER SECTION (circle most applicable) NE SE SW NW

Postal Zip Code at Plant Site (WWTP Only): _____

OTHER LOCATION DESCRIPTION South of Bella Vista and East of Hunt Highway

COUNTY Pinal

3. PROJECT DESCRIPTION: Construct approx 1400 LF of 8" and 5000 LF of 12" water main for transmission of well water to treatment and storage facility.

4. PROJECT ENGINEER: WLB Group, 333 E. Osborn #350 Phoenix, AZ 85012 (602) 279-1016
TYPE OR PRINT NAME/MAILING ADDRESS/PHONE NUMBER

5. PROJECT OWNER: Johnson Utilities, 5320 E. Shea, Scottsdale, AZ (602) 998-3300 12-23-97
TYPE OR PRINT NAME/MAILING ADDRESS/PHONE NUMBER SIGNATURE DATE

6. PLAN DOCUMENTS SUBMITTED (SEE ADEQ CHECKLIST-SUBMITTAL REQUIREMENTS BY PROJECT TYPE):
Please attach a list of documents submitted with this completed application form.
Beginning December 9, 1996, ADEQ requires a payment of initial fee for certain wastewater project types.
NOTES:
A. INCOMPLETE SUBMITTALS WILL NOT BE LOGGED IN;
B. APPLICATIONS WITHOUT THE INITIAL FEE WILL NOT BE LOGGED IN.

7. AQUIFER PROTECTION PROGRAM INFORMATION (REQUIRED FOR ALL SEWAGE AND SUBDIVISION APPLICATIONS

AGGREGATED SEWAGE FLOW FOR OVERALL PROJECT _____ GALLONS PER DAY

APP DETERMINATION OF APPLICABILITY FORM (check one): ☐ Not Submitted ☐ Submitted _____
DATE SUBMITTED

APP APPLICATION FORM (check one): ☐ Not Submitted ☐ Submitted _____
DATE SUBMITTED

8. OWNER/AGENT AGREEMENT AND SCHEDULE: AGREEMENT-The undersigned as Project Owner or as acting Agent for the Project Owner hereby (a) grants ADEQ permission to enter the site for inspections; (b) authorizes the Project Engineer to prepare and submit plan documents to the ADEQ ENGINEERING REVIEW DESK; and (c) agrees to construct the sanitary facilities according to the ADEQ Certificate of Approval and the approved plan documents.

CONSTRUCTION SCHEDULE-Estimated start date _____ Estimated completion date _____

Brian Tompsett	WLB Group		1-7-1998
TYPE OR PRINT NAME	AFFILIATION	SIGNATURE	DATE
TYPE OR PRINT NAME	AFFILIATION	SIGNATURE	DATE

ADEQ COMPLIANCE EVALUATION:
IN COMPLIANCE: (Y/W) ____ / ____
NON-COMPLIANCE: (Y/W) ____ / ____
COMMENTS:

ADEQ FILE NO:
ADEQ SITE CODE:
INV NO. (50000 SERIES):
INITIAL FEES $:

ADEQ/WQD-114BLUE(REV.12/3/96)

KS

PINAL COUNTY DEPARTMENT OF PUBLIC HEALTH - ENVIRONMENTAL HEALTH DIVISION
188 South Main Street, Coolidge, Arizona 85228

980006

PINAL COUNTY APPROVAL OF WATER AND/OR WASTEWATER PROJECT

_____ New Sewage Disposal System

_____ Individual Sewage Disposal System

_____ Extension or Addition to Existing Sewage Disposal System

_X_ New Public Water Supply

_____ Extension/Addition to Existing Water Supply

To be filled out, signed and submitted with all Applications for Approval to Construct Water and/or Wastewater Facilities and/or Applications for Approval of Sanitary Facilities for Subdivisions.

JOHNSON RANCH WATER SYSTEM FACILITY - PHASE ONE

NAME OF PROJECT

Plans and data for the above named project have been reviewed by the PINAL COUNTY DEPARTMENT OF PUBLIC HEALTH and approval is hereby given for the project, except as noted below. For individual sewage disposal systems, this is an approval of method only and approval of plans, permits and inspection of individual systems by PINAL COUNTY DEPARTMENT OF PUBLIC HEALTH will be required later. **FINAL APPROVAL BY THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY MUST BE OBTAINED BEFORE CONSTRUCTION OF THE PROJECT CAN BEGIN.**

DEPT OF ENVIRONMENTAL QUALITY
FEB 2 1998
Engineering Review

Date January 21, 1998

Name Raymond E. Glos

Signature

Title Environmental Health Administrator

EH-1295

AQUATIC CONSULTING & TESTING, INC.
1525 W. University Drive, Suite 106 • Tempe, AZ 85281
Phone: (602) 921-8044 • Fax: (602) 921-0049

CHAIN OF CUSTODY

PAGE ___ OF ___

Client: EUS

Address: _____ Street

_____ City, State, Zip

Phone/Fax: _____

Contact: _____

Sampler Signature: _____

SAMPLE ID	DATE	TIME	SAMPLE TYPE	Chemistry: Metals* / TCLP	TDS / TSS / TS / SETT	O+G / TPHC / MBAS	BOD / COD	Tot. P / O-PO4	Nitrate + Nitrite / Nitrate / Nitrite	TKN / Ammonia	VOC / THM's	Biology: Tot. Coliform: P/A	Tot. Coliform: MPN	Fecal Coliform	Colilert (24hr)	Plate Count	Biomonitoring: Acute	Chronic	AWET (SWRO)	MPA	No. of Containers: ACID	NONE	OTHER	Laboratory Number
Tank	3/13/99	1000	DW												X								99024E
Taken after storage tank for project which includes well #4, transmission main & storage tank																							

Remarks:
2 hrs
50 miles

AQUATIC CONSULTING & TESTING, INC.
Phone: (602) 921-8044 Fax: (602) 921-0049

Attn: Brian Pomsett
WLB Group
3-15-99 @ 0920
Fax#: 279-7810

colilert sample passed 3-14-99 @ 1115

COL = 0
3-14-99
@ 1115

Sample Receiving:
Intact: ✓ Yes ___ No
Temp: Cool
Preserved: ___ Yes ___ No
Total # containers: 1

1. Relinquished By:	2. Relinquished By:	3. Relinquished By:
Date/Time 5/13/99 1115	Date/Time	Date/Time
1. Received By:	2. Received By:	3. Received By:
Date/Time	Date/Time	Date/Time

*** Using the "Remarks:" area, please specify which metals are to be analyzed.***

By signing this chain of custody, the designated client and agent agree to pay Aquatic Consulting & Testing, Inc. for all services rendered in conjunction with the submitted samples within 30 days of invoice. It is the client's responsibility to note purchase order numbers or other responsible parties on the form and failure to do so does not constitute justification for non-payment.

White-Laboratory Yellow-Report Pink-Client

Acculabs Inc.
North Phoenix 2020 West Lone Cactus, Phoenix AZ 85027 ■ 602-780-4800 ■ Fax 780-7695

Environmental Utility Services, L.L.C. / Johnson Ranch
19002 N. 21ST Avenue
Phoenix, AZ 85023
Attn: Paul Hendricks

Received: 03/02/99
Reported: 03/05/99
Lab ID: 3-903-048

SAMPLE IDENTIFICATION: EUS-Johnson Ranch
SAMPLE DATE & TIME: 03-02-99/1115

METHODS AND QUALITY CONTROL:

The results in this report were generated using approved methods referenced by the U.S. EPA and the Arizona Department of Health Services.

RESULTS:

PARAMETER	METHOD	RESULT	UNITS	ANALYZED	ADHS No.
Nitrogen, Nitrate	4500NO3E	8.5	mg/L	03-02-99	AZ0562
Total Dissolved Solids	2540C	906	mg/L	03-03-99	AZ0562

Approved - David L. Fetvelt

Final Review - Erik M. Bolin

Vladimir D. Bolin - Laboratory Director

ATTACHMENT to WLB Letter dated March 26, 1998 re: ADEQ # 980006

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull Russell F. Rhoades, Director

March 17, 1998

Brian P. Tompsett, P.E.
Director of Operations
The WLB Group
333 East Osborn, Ste 380
Phoenix, AZ 85012

Re: Johnson Ranch Water Treatment Plant
Application for Approval to Construct
ADEQ File No. 980115

Dear Mr. Tompsett:

We have completed a review of the project application, design report, plans, specifications, etc. While overall the project meets the approval criteria, the following comments have also been generated to which your response is requested.

1. Wells and storage tanks should be outside or above the 100-year flood elevation which may be indicated on the drawings or included in the design report.

2. ADEQ approval should be obtained for Well No. 4 (and other subsequent wells). To obtain a well approval, the following information needs to be submitted to us:(a) wellhead and site drawings, (b) a copy of the Notice of Intent to Drill, © pump test data, (d) inorganic, organic, volatile organic, physical, bacteriological & radiochemical analyses of the water, (e) setbacks to sewer pipes, if any, (f) an Application for Approval to Construct. For more information, Engineering Bulletin No. 10 may be consulted.

3. Well No. 4 may still need treatment for nitrate removal as the other wells in the area have shown a high nitrate content and additional sampling in Well No. 4 may show a level higher than the MCL, particularly because the current level of 9.2 mg/l is close to the MCL.

4. Bacteriological results are needed for Well No. 4.

5. Specifications for the reverse osmosis unit should be included.

6. If a blending plan is proposed in the future, that plan should meet the requirements of Arizona Administrative Code (A.A.C.) R18-4-221.

Out review will continue after your response to the above comments is received. In the meantime if you have any questions, please call me at (602) 207-4671.

Sincerely,

Janak Desai

Janak Desai, E.E.S.
Technical Engineering Unit
Water Quality Division

JD:ce

Jane Dee Hull
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

3033 North Central Avenue • Phoenix, Arizona 85012-2809
(602) 207-2300 • www.adeq.state.az.us

Jacqueline E. Schafer
Director

APPROVAL OF CONSTRUCTION

Project Description: Construction of well site #5 (DWR #55-559843).

Location: Johnson Ranch-Pinal County

JR 5

Project Owner: Johnson Utilities
Address: 5230 E. Shea Blvd.
Scottsdale, AZ 85254

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On October 11, 2000, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On October 11, 2000, Brian Tompsett , P.E., certified the following:

- a final construction inspection was conducted on October 11, 2000 and also on January 16, 2002;
- the referenced project was constructed according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct;

Microbiological samples were collected on July 17, 2000, and analyzed on July 18, 2000, by Aquatic Consulting and Testing, Inc., ADHS License No. AZ0003. The sample results were negative for total coliform.

This Approval of Construction is subject to the provisions 1thru 3 on page two of this approval.. Be advised that A.A.C. R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

AH:RK

PWS No.:11-128

ADEQ Project No.:980006
LTF No.: None

Aolad Hossain, P.E., Manager
Technical Engineering Unit
Drinking Water Section

1/24/02
Date Approved

c: DWCEU Facility File
TEU Construction File
CRO Approval of Construction File
Pinal County Health Department
Pinal County Planning & Zoning Department
AZ Corporation Commission
Engineer: Brian P. Tompsett, P.E., The WLB Group
Patrick Finton, Field Engineer

APPROVAL OF CONSTRUCTION
WATER FACILITIES
ADEQ FILE NO. 980006
PAGE 2 OF 2: PROVISIONS

1. Well #5 (DWR #55-559843) will not be operated alone and shall be blended with well #4 (DWR #55-558451) before R.O. Unit treatment. (See blending plan ADEQ File No. 20020012). The nitrate concentration in the blended water shall not exceed 10 mg/l.

2. Certificate of completion for 100,000 gallon storage tank shall be submitted to ADEQ in order to get Approval of Construction. (ADEQ File #20000556).

3. New disinfection of well #5 and new microbiological samples will be required before placing the well in to service.

Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street, Phoenix, Arizona 85007
(602) 771-2300 • www.adeq.state.az.us

Stephen A. Owens
Director

Water Quality Division

APPROVAL OF CONSTRUCTION (AOC)

Project Description: Circle Cross Ranch Water Plant No. 1

Location: E. of the intersection of Meridian Rd. and Empire Rd., Pinal County.

Project Owner: Johnson Utility Company, 5230 E. Shea Blvd. #200, Scottsdale, AZ 85254.

The Arizona Department of Environmental Quality (ADEQ) hereby issues an AOC for the above described facility based on the following provisions of the Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On November 22, 2002, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On August 30, 2004, Certificate of Completion and testing results were submitted to ADEQ.

On August 24, 2004, Robert G. Byall, P.E. certified the following:

- a final construction inspection was conducted on July 28, 2004;
- the referenced project was constructed according to the approved plans and specifications, ADEQ's Certificate of Approval to Construct, and As-built plans;
- water system pressure and leakage tests were conducted on July 09, 2004, and the results were within the allowable leakage rates;
- the water distribution system was disinfected according to an ADEQ-approved method; and
- microbiological samples were collected and sampled by Statewide Disinfection Services, ADHS License No. AZ0637. The sample results were negative for total coliform.

This Approval of Construction authorizes the owner to begin operating the above-described facilities as represented in the approved plans on file with ADEQ. Be advised that A.A.C. § R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

mah

Edwin K. Swanson FOR 10/22/04
Technical Engineering Unit
Drinking Water Section
Date Approved

PWS No.: 11-128
ADEQ Project No.: 20020489
LTF No.: 33909

cc: Pinal County Health Department
Pinal County Planning and Zoning Department
Water Company: Johnson Utilities
Engineer: Robert G. Byall, P.E.
ADEQ - DWFEIU
Facility File ADEQ-DWCEU
Project File No.: 20020489, TEU
ADEQ - Pinal County Liaison
Romann Diaz, Manager, Field Service Unit

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT DRINKING WATER FACILITIES

ADEQ FILE NO.: 20020489	**LTF No.:** 27948
SUPPLYING SYSTEM NAME: Johnson Utilities Co.	**PUBLIC WATER SYSTEM NO.:** 11-128
PROJECT NAME: Johnson Utilities Circle Cross Ranch Water Plant No. 1	
PROJECT OWNER: Johnson Utilities Company, LLC	
ADDRESS: 5230 E. Shea Blvd, Ste. 200, Scottsdale, AZ 85254	
LOCATION: East of the intersection of Meridian Road and Empire Road	**COUNTY:** Pinal
PROJECT DESCRIPTION: Installation of new 1,000 gpm well; new 500,000 gallon storage tank; triplex booster pump station; 5,000-gallon hydropneumatic tank; 800 LF of 12-inch water lines; and related fittings.	

Approval to Construct the above-described facility as represented in approved plan documents on file with the Arizona Department of Environmental Quality is hereby given subject to the following provisions:

1. This project must be constructed in accordance with all applicable laws, including Title 49, Chapter 2, Article 9 of the Arizona Revised Statutes and Title 18, Chapter 4, Article 5 of the Arizona Administrative Code.

Upon completion of construction, the engineer shall fill out the Engineer's Certificate of Completion, and forward it to the Drinking Water Field Engineering and Inspection Unit - Phoenix. If all requirements have been completed, that unit will issue a Certificate of Approval of Construction. R18-4-507(B), Ariz. Admin. Code. At the project owner's request, the Department ***may*** conduct the final inspection required pursuant to R18-4-507(B); such a request must be made in writing in accordance with the time requirements of R18-4-507(C), Ariz. Admin. Code.

Provisions 3 through 14 are continued on Page 2 of 2 total pages

AH:MAH:mah
20489dbm.2bt

By: _____ 11/22/02.
Aolad Hossain, Manager, P.E. — Date Approved
Technical Engineering Unit
Drinking Water Section
Water Quality Division

cc: **File No: 20020489, LTF No. 27948**
County Health Department: Pinal
Drinking Water Field Engineering/Inspection Unit - Phoenix
Owner: Johnson Utilities Company, LLC
Planning & Zoning: Pinal County
Engineer: Jim Burke, P.E., WLB Group
Engineering Review Database

3. This certificate will be void if construction has not started within one year after the Certificate of Approval to Construct is issued, there is a halt in construction of more than one year, or construction is not completed within three years of the approval date. Upon receipt of a written request for an extension of time, the Department may grant an extension of time; an extension of time must be in writing. R18-4-505(E), Ariz. Admin. Code.

4. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department.

5. The open end of each air relief pipe from automatic valves shall be extended to at least one foot above grade and shall incorporate pipe elbows to cause the opening, permanently covered with #16 mesh screen, to face downward. The "As-Built" plans shall show air relief valve details.

6. No Approval of Construction shall be issued for this project until the project owner shows that all infrastructure required to meet pressure and storage requirements are constructed and an Approval of Construction has been issued for them.

7. The following items must be submitted before approving the well as a drinking water source:
   a. Inorganic, asbestos, radiochemical, microbiological, volatile organic compounds and synthetic organic analysis must be submitted for the well from a lab certified by the Arizona Department of Health Services,
   b. Pump test data for the well at steady state for at least four hours,
   c. Well driller's log, and
   d. Department of Water Resources well registration information.

8. Water plant area must be graded 100 feet away from the water facilities.

9. Blow-off valve with a minimum diameter of 2 inches must be installed at the dead end at Station 72+16.18.

10. An air and vacuum relief valve must be installed at the high point before the dip under the channel at STA 64+00.

11. The butterfly valve (#3) at the discharge line on the well must be moved to the other side of the check valve.

12. The storage tank drawing at the lower left of Plan Sheet No. 7 must be labeled top view and not rear view.

13. The water system minimum storage capacity shall comply with A.A.C. R18-4-503.

14. The water distribution system shall maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow as required by A.A.C. R18-4-502.B.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT
WATER FACILITIES

ADEQ File No: 20020539	
System Name: Johnson Util	**System Number:** 11128
Project Owner: Johnson Util	
Address: 5230 E. Shea Blvd., #200, Scottsdale , AZ 85254	
Project Location: Apache Junction	**County :** Pinal
Description: CONSTRUCTION OF PROPOSED MODIFICATIONS TO REFIT EXISTING SYLINE WELL WITH DWR #55-621462, 1,000,000 GALLON WATER STORAGE TANK WITH RELATED TRANSMISSION LINES TO CONNECT TO DISTRIBUTION SYSTEM AND OTHER APPURTENANCES.	

Approval to construct the above-described facilities as represented in the approved documents on file with the Arizona Department of Environmental Quality is hereby given subject to provisions 1 through 7 continued on page 2 through 2

1. This project must be constructed in accordance with all applicable laws, including Title 49, Chapter 2, Article 9 of the Arizona Revised Statutes and Title 18, Chapter 4, Article 5 of the Arizona Administrative Code.
2. Upon completion of construction, the engineer shall fill out the Engineer's Certificate of Completion and forward it to the Central Regional Office located in Phoenix. If all requirements have been completed, that unit will issue a Certificate of Approval of Construction. R18-4-507(B), Ariz. Admin.Code. At the project owner's request, the Department **may** conduct the final inspection required pursuant to R18-4-507(B); such a request must be made in writing in accordance with the time requirements of R18-4-507(C), Ariz. Admin. Code.
3. This certificate will be void if construction has not started within one year after the Certificate of Approval to Construct is issued, there is a halt in construction of more than one year, or construction is not completed within three years of the approval date. Upon receipt of a written request for an extension of time, the Department may grant an extension of time; an extension of time must be in writing. R18-4-505(E), Ariz. Admin. Code.
4. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department. R18-4-507(A), Ariz. Admin. Code.

Reviewed by RK1

By: _____ 12/4/02
Aolad Hossain., P.E., Manager Date
Technical Engineering Unit
Water Quality Division

cc: File No : 20020539
Regional Office: Central
Owner: Johnson Util
County Health Department: Pinal
Engineer: Wlb Group
Planning and Zoning/Az Corp. Commission
Engineering Review Database - Etr021

5. Water storage tank roof vent must be screened with #16 mesh screen.

6. Nitrate level in the skyline well (DWR #55-621462) of 5.98 mg/l exceeds trigger level of 5 mg/l, the water system shall increase monitoring frequency as required by A.A.C. R18-4-208 and R18-4-209.

7. During the operation if the maximum level of nitrate concentration in the skyline well exceeds maximum contaminant level of 10 mg/l, the water shall be blended as per ADEQ approved blending plan or provide treatment to reduce the level below 10 mg/l.

8. After the well modification is completed the well must be disinfected and microbiological (total coliform and E. Coli) sample shall be taken and the test results shall be negative before placing the well into service.

9. Pump test data for the well at a steady state for at least four hours must be submitted before approving the well as a drinking water source.

Janet Napolitano
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 W. Washington Street Phoenix, Arizona 85007
(602) 771-2300 • www.adeq.state.az.us

APPROVAL OF CONSTRUCTION
(PARTIAL)

Project Description: Partial Approval of Construction for proposed modification to refit existing Skyline well with DWR #55-621462.

Location: Pinal

Project Owner: Johnson Utilities
Address: 5230 E. Shea Blvd.
Suite 200
Scottsdale, AZ 85254

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On December 4, 2002, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On July 3, 2003, James Ray Burke, P.E., certified the following:

- a final construction inspection was conducted on June 12, 2003;
- the referenced project was constructed according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct;
  the well was disinfected on July 23, 2003 according to an ADEQ-approved method.

Microbiological samples were collected on July 24, 2003 and analyzed on July 25, 2003, by Aquatic Consulting and Testing Inc., ADHS License No. AZ0637. The sample results were negative for total coliform.

This Approval of Construction is subject to the provisions 1 through 5 on page 2 of this approval. Be advised that A.A.C. R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

AH:RK1

PWS No.: 11-128

ADEQ Project No.: 20020539
LTF No.: 30444

Aolad Hossain, P.E., Manager
Technical Engineering Unit
Drinking Water Section

8/20/03
Date Approved

c: DWCEU Facility File
TEU Construction File
CRO Approval of Construction File
Pinal County Health Department
Pinal County Planning & Zoning Department
AZ Corporation Commission
Engineer

APPROVAL OF CONSTRUCTION
ADEQ FILE NO. 20020539
PAGE 2 OF 2: PROVISIONS

1. This partial Approval of Construction is issued for the Skyline well only.

2. Approval of Construction for 1,000,000 gallon water storage tank and related transmission lines to connect to distribution system will be submitted later to obtain Approval of Construction.

3. Nitrate level in the Skyline well (DWR #55-621462) of 5.98 mg/l exceeds trigger level of 5 mg/l, the water system shall increase monitoring frequency as required by A.A.C. R18-4-208 and R18-4-209.

4. During the operation if the maximum level of nitrate concentration in the Skyline well exceeds maximum contaminant level of 10 mg/l , the water shall be blended as per ADEQ approved blending plan or provided treatment to reduce the level below.

5. If the provisions in this Approval of Construction are not implemented, this Approval of Construction will be **Null and Void.**

Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 W. Washington Street Phoenix, Arizona 85007

APPROVAL OF CONSTRUCTION

Project Description: Construction of 1,000,000 gallon San Tan water storage tank with related transmission lines to connect to distribution system and other appurtenances.

Location: Pinal

Project Owner: Johnson Utilities
Address: 5230 E. Shea Blvd.
Suite 200
Scottsdale, AZ 85254

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On December 4, 2002, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On February 24, 2004,, James Ray Burke, P.E., certified the following:

- a final construction inspection was conducted on January 28,2004;
- the referenced project was constructed according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct;
  water system pressure and leakage tests were conducted on November 24, 2003, and the results were withing the allowable leakage rates; and
  the water distribution lines were disinfected on December 2, 2003 and the water storage tank was disinfected on February 17, 2004, according to an ADEQ-approved method.

Microbiological samples were collected (lines/storage tank) on December 4, 2003 and February 20, 2004, and analyzed on December 5, 2003 and February 21, 2004, by Aquatic Consulting and Testing Inc., ADHS License No. AZ0637. The sample results were negative for total coliform.

This Approval of Construction is subject to the provisions 1 through 2 on page 2 of this approval. Be advised that A.A.C. R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

AH:RK1

PWS No.: 11-128

ADEQ Project No.: 20020539
LTF No.: 32382

Aolad Hossain, P.E., Manager
Technical Engineering Unit
Drinking Water Section

3/30/04
Date Approved

c: DWCEU Facility File
TEU Construction File
CRO Approval of Construction File
Pinal County Health Department
Pinal County Planning & Zoning Department
AZ Corporation Commission
Engineer

APPROVAL OF CONSTRUCTION
ADEQ FILE NO. 20020539
PAGE 2 OF 2: PROVISIONS

1. This Approval of Construction is issued for transmission lines and 1,000,000 gallon San Tan water storage tank only.

2. The Approval of Construction of proposed modifications to refit existing Skyline well with DWR #55-621462 which was originally submitted under this project was approved on August 20, 2003.

Jane Dee Hull
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

3033 North Central Avenue • Phoenix, Arizona 85012-2809
(602) 207-2300 • www.adeq.state.az.us

Jacqueline E. Schafer
Director

February 13, 2002

Brian Tompsett, P.E.
The WLB Group
333 E. Osborn Rd., Ste 380
Phoenix, AZ 85012

Re: Revised Nitrate Blending Plan for Well #4 (DWR #55-558445) & Well #5 (DWR #55-559843) at Johnson Utilities Plant #1 Excluding Three Oasis Wells
ADEQ File No. 20020012
Johnson Ranch Public Water System #11-128

Dear Mr. Tompsett:

A review has been conducted of the revised nitrate blending plan for wells #4 and #5 dated January 7, 2002 that you submitted to this office. The revised blending is approved only for wells #4 and #5 excluding three Oasis wells and is subject to the following conditions:

1). The approved blending plan should produce at least 1,018,080 gallons per day of blended water meeting the nitrate MCL. The 1,018,080 gallons per day may be sufficient to provide water up to 3915 residential dwelling units, and is based on master design report/subdivision commitments which was submitted by WLB Group on January 29, 2002. Assuming no commercial demands, and the average flow per residential service during the peak month does not exceed 260 gallons per day. If the usage of water per service connection increases, then the capacity, operation and blending has to be reevaluated by ADEQ.

2). The approved nitrate blending plan is based on the following information that was submitted to ADEQ by WLB Group:

a. The average flow per residential service during peak month is 260 gallons per day based on actual meter readings by Johnson Utilities.

b. The nitrate concentration in raw water from well #4 will not exceed 11.9 mg/l.

c. The nitrate concentration in raw water from well #5 will not exceed 20.7 mg/l.

d. The raw water production from well #4 will be at least 550 gpm and well #5 will be operated at 240 gpm for blending purposes.

e. The R.O. unit will deliver 250 gpm of treated water with nitrate concentration of 1.48 mg/l.

f. The average day use in the peak month storage capacity is at least 1,150,000 gallons, which was submitted on February 1, 2002, excluding commercial demands.

g. Subdivision commitment list dated January 29, 2002.

3). ADEQ understands that actual demand will be less than the approved design capacity during the construction of full build out of the development and the actual demand will lag behind approved demand. However, ADEQ recommends to increase design capacity of average day demand in the peak month including storage capacity from 260 gallons/day to 338 gallons/day per residential service plus fire demand and commercial demand.

4). Based on the information submitted for master plan design, additional sources of water supply will be needed to support all the commercial developments. Any expansion of residential/all commercial service connections will require submittal of revised residential and commercial commitment lists including master design report for ADEQ approval.

5). Whenever the water treatment plant and blending protocol is changed, the monitoring requirements shall be as follows:

a. During the first month of operation weekly monitoring for NITRATE, shall be collected from the following 4 locations. The untreated water (well water/raw water from each well), treated water (directly out of the reverse osmosis unit), and the blended water at the Point of Entry (POE) into the distribution system.

b. After a minimum of four (4) weekly NITRATE samples have been collected and analyzed, monthly NITRATE monitoring shall be conducted from the untreated water (each well), treated water and blended water at POE for the next five (5) months.

c. If after the first six (6) months of operation, analytical results from the osmosis unit indicate that the nitrate removal efficiency of the reverse osmosis unit is consistent with levels indicated in the submitted blending plan and analytical results from the POE are below the maximum contaminant level of 10 mg/l the Department may reduce the monitoring frequency to quarterly.

6). All required NITRATE samples collected from analyses from the POE shall be designated as "routine monitoring" and shall be submitted as compliance samples on analytical forms suitable for entry into the ADEQ Drinking Water database and the NITRATE analyses from the untreated water and the treated water shall be designated as "non-regulatory".

7). Whenever a new source of water is added to the system or an existing source is removed from service, or the relative flow rates and/or concentration of nitrate from existing sources which are being blended are changed in such a way that the blend is changed, an amended blending plan shall be submitted to the Department to confirm that the new blend also meets the NITRATE MCL.

8). When the reverse osmosis unit reads high conductivity levels, both the reverse osmosis unit and the raw water pumped from the 100,000 gallon storage/wells will be shut down so the raw water will not pump directly into the 500,00 gallon mixing storage tank without treatment.

9). As-built plans shall show all the flow controls, automatic or electronic devices which will be incorporated to ensure that the blend remains in the desired range or else shuts off the offending source or triggers an alarm when the blend fall out of the desired range.

10). The operation and maintenance manual shall be revised to include the following blending operation:

a. 240 gpm from well #5 will be blended with 550 gpm from well #4.

b. Nitrate concentration in well #5 shall not exceed 20.7 mg/l and well #4 shall not exceed 11.9 mg/l.

c. Blended nitrate concentration from wells 4 & 5 shall not exceed 14.57 mg/l.

d. The R.O. Unit is operated by raw water supplied from the 100,000 G. storage tank with a flow of 333 GPM. The treated water from R.O. unit (250 gpm) is blended with 457.GPM of blended raw water from wells 4 and 5.

e. The operation of R.O. Unit with the wells #4 and 5 shall be as follow:

1. The 100,000 gallon tank at Johnson Utilities Plant #1 should be filled with blended water from wells 4 and 5 at 790 gpm with blended nitrate concentration of 14.57 mg/l.

2. R.O. Unit should draw 333 gpm from 100,000 G. water tank and deliver 250 gpm with nitrate concentration of 1.48 mg/l to the 500,000 G. blending storage (Plant #1) tank to be blended with 457 gpm of blended water from wells 4 and 5 with concentration of nitrate of 14.57 mg/l to provide 707 gpm of blended water with concentration of 9.94 mg/l.

3. Anticipated total water production capacity from this operation should be able to produce 1,018,080 gallons per day and should serve at least 3915 residential service connections.

f. During the operation the maximum level of nitrates concentration in the blended water at POE shall be below the maximum contaminant of 10mg/l, otherwise the blending plan shall be reevaluated by ADEQ.

g. All other information pertaining to the operation of the R.O. system.

11). The maintenance and operation of the reverse osmosis unit shall be in accordance with manufacturers recommendations.

12). All backwashing shall be manual and conducted in accordance with manufacturers recommendations.

13). All backwashing and reject water shall be discharged in accordance with ADEQ permits.

14). All chemicals stored or used on-site shall be labeled with their common name such as acid or anti-scalant and comply with applicable safety measures.

15). If the nitrate concentration in the wells changes, then the blending plan has to be reevaluated by ADEQ.

16). If any additional service connections is supplied by the water system in the future, the operation, blending and supply shall be reevaluated by ADEQ.

17). The three Oasis wells with DWR No.'s 55-582085, 55-582086 and 55-582087 submitted under ADEQ File No. 20010611 are not part of this blending plan. If the water system chooses to consider these wells part of blending plan, the following shall be submitted.

a. Plans to show the connection of these wells to the 500,000 gallon blending storage.

b. Complete water quality analysis for well with DWR #55-582087.

c. For wells with DWR No.'s 55-582085 and 55-582086 please submit the following:

1. From SOC's contaminant #2105, 2110, 2326, 2041, 2040 and 2031.
2. Microbiological analysis.

d. Respond to all review comments dated December 17, 2001 sent by Katrin Stukov of Technical Engineering Unit for the three Oasis wells (ADEQ File #20010611).

e. Pump test data for all the three wells.

f. Approval to Construct and Approval of Construction have to be obtained from ADEQ for these three Oasis wells.

18). a. Approval of Construction have to be obtained from ADEQ for File No. 20010377 and File No. 20000349.

b. The interconnections of these projects to the distribution system.

19. The water supplier shall develop an emergency operation plan in order to assure continuation of service when there is failure in R.O. system as required by A.A.C. R18-4-116.

20). Provide a procedure which addresses how Johnson Utilities Water Company will conduct public notices if a Maximum Contaminant Level (MCL) for Nitrate or Nitrite occurs. Please include in this procedure, exact time frames to follow, information regarding how the public (such as radio and/or television stations) and ADEQ will be notified and the specific information to be indicated in the notices as per A.A.C. R18-4-104 and 105. All analyses required by this approval shall be reported to the Department within 10 days of sampling. All analytical reports related to this blending plan shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Division
Drinking Water Section, Technical Engineering Unit
Attn: Raffi Karamian
3033 N. Central Ave.
Phoenix, AZ 85012

If you have any questions, please call me at (602) 207-4650.

Sincerely,

Raffi Karamian, E.E.S.
Technical Engineering Unit
Water Quality Division

RK:ce

cc: Johnson Utilities
Pinal County Health Department
Facility File No. 11-128
Bill DePaul, Compliance and Enforcement Unit
Linda Cheney, CMX Group, Inc.
Aolad Hossain, TEU
Greg Brown
ADEQ File No. 20020012

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull Jacqueline E. Schafer, Director

March 8, 2001

Brian Tompsett, P.E.
The WLB Group
333 E. Osborn Rd., Ste 380
Phoenix, AZ 85012

Re: Revised Nitrate Blending Plan for Well #4 and Emergency Blending Plan for Well #5 as back-up.
Johnson Ranch
Public Water System #11-128

Dear Mr. Tompsett:

A review has been conducted of the revised nitrate blending plan you submitted for wells #4 and #5 dated January 23, 2001 together with subsequent revisions. While the data submitted contained several blending scenarios, a blending plan as required by the Arizona Administrative Code R18-4-221.A.1.a/b was not included. (See attachment).

ADEQ has identified a blending scenario that will produce up to 720,000 gallons per day of blended water meeting the nitrate MCL. 720,000 gallons per day is sufficient to approve 2130 dwelling units, assuming no commercial demands, that the average flow per residential service connection is 260 gallons per day and that the average flow during the peak month is 338 gallons per day, that the raw water from Well #4 will not exceed a nitrate concentration of 13.1 mg/l and that the RO unit would be operated 15 hours per day. The blending plan approved March 13, 2000 produced 672,480 gallons per day with 24 hour operation of the RO unit and a raw water concentration not exceeding 19 mg/l. The blending plan was modified January 3, 2001 to add a 100,000 gallon storage tank prior to the RO unit and produced up to 672,480 gallons per day with increased operational flexibility. 672,480 gallons per day would meet the revised demands for 1989 residential service connections.
The revised blending plan has been approved with the assumptions that storage provides the needed fire flow and does not have to be part of the daily demand and that actual demand will be less than the approved capacity during the construction of full build out of the development area. Because, actual demand will lag behind approved demand, the various approved treatment and blending scenarios do not need to be constructed or implemented until the demand is actually realized.

The revised blending is approved subject to the following conditions:

1. Whenever, the actual demand reaches 90 percent of the capacity of the existing blending scenario, the approved treatment-blending scenario producing greater production should be implemented and ADEQ should be advised of the proposed operating changes.

2. Whenever the treatment plant and blending protocol is changed the monitoring requirements shall be as follows:

   a. During the first month of operation weekly monitoring for NITRATE, shall be collected from the following 3 locations. The untreated water (well water/raw water), treated water (directly out of the reverse osmosis unit), and the blended water at the Point of Entry (POE) into the distribution system.

   b. After a minimum of four (4) weekly NITRATE samples have been collected and analyzed, monthly NITRATE monitoring shall be conducted from the untreated water, treated water and the blended water at POE for the next five (5) months.

   c. If after the first six (6) months of operation, analytical results from the reverse osmosis unit indicate that the nitrate removal efficiency of the reverse osmosis unit is consistent with levels indicated in the submitted blending plan and analytical results from the POE are below the maximum contaminant level of 10 mg/l the Department may reduce the monitoring frequency to quarterly.

3. All required NITRATE samples collected from analyses from the POE shall be designated as "routine monitoring" and shall be submitted as compliance samples on analytical forms suitable for entry into the ADEQ Drinking Water database and the NITRATE analyses from the untreated water and the treated water shall be designated as "non regulatory".

4. Whenever a new source of water is added to the system or an existing source is removed from service, or the relative flow rates from existing sources which are being blended are changed in such a way that the blend is changed, an amended blending plan shall be submitted to the Department to confirm that the new blend also meets the NITRATE MCL.

5. When the reverse osmosis unit reads high conductivity levels, both the reverse osmosis unit and the raw water pumped from the 100,000 g. storage tank/well will be shut down so the raw water will not pump directly into the 500,000 g. mixing storage tank without treatment.

6. As-built plans shall show all the flow controls, automatic or electronic devices which will be incorporated to ensure that the blend remains in the desired range or else shutts off the offending source or triggers an alarm when the blend fall out of the desired range.

7. The operation and maintenance manual shall be revised to include the following new treatment-blending option:

   a. The R.O. Unit is operated by raw water supplied from the 100,000 G. storage tank with a flow of 333 GPM. The treated water from R.O. unit is blended with 500 GPM of raw water from wells 4 or in an emergency with well #5

   b. The operation of R.O. Unit with the wells #4 and #5 shall as be follow:

      1. The R.O. Unit and well #4 shall be operated at the same time for 5 hours three times daily with maximum water supply of 800 GPM with maximum daily output of 720,000 G. when operating 15 hours/day.

      2. Well #5 shall be operated 1.5 hours to every 5 hours of R.O. Unit operation three times daily with maximum water supply of 259 GPM with maximum daily output of 373500 G. when operating 15 hours/day.

      3. Well #5 shall be operated in an emergency situation only without well #4 .

      4. If the raw water from wells #4 and #5 and treated water from R.O. Unit are blended, a new blending plan shall be submitted to ADEQ for evaluation. By blending wells 4 and 5, the water system can increase blended water daily output.

   c. Every 5 hours of R.O. Unit operation, the 100,000 gallon water tank shall be refilled with 550 GPM for duration of 3 hours regardless of which well is operated.

   d. During the refilling of 100,000 gallon tank, direct raw water from the well #4 or #5 shall not be used to fill up the 500,000 gallon storage tank.

   e. During the refilling of the 100,000 gallon tank, the flanged butter fly valve on the transmission main shall be closed to prevent any raw water flow to the 500,000 gallon storage tank which may impact the blending process.

f. Necessary alarm and control devices shall be provided in the existing 500,000 gallon storage tank, 100,000 gallon storage tank and the well pump. During the filling of the 500,000 gallon storage tank the R.O. Unit shall be in normal operation.

g. This revised blending plan is based on the reverse osmosis unit which is designed to treat 333 GPM of raw water, which produces 250 GPM of treated water which in turn is blended with 550 GPM of raw water from wells #4 or in an emergency from well #5.

h. This evaluation for a production of 720,000 gallons per day is based on a maximum nitrate concentration of 13.1 mg/l in the raw water from well #4 and with the R.O. Unit producing a nitrate concentration of 1.20 mg/l. The evaluation also is based on a maximum nitrate concentration of 20.1 mg/l in the raw water from well #5 and that when it is to be used in an emergency the nitrate output from the R.O. Unit will not exceed 2.75 mg/l. If the concentration changes, the blending plan shall be reevaluated.

i. During the operation the maximum level of nitrates concentration in the blended water at POE shall be below the maximum contaminant of 10 mg/l otherwise the blending plan shall be reevaluated.

j. This evaluation is based on the information provided by the Engineer and is approximate. It is based on each residential unit using an average of 260 GPD.and an average during the peak month not to exceed 338 GPD. If the usage of the water increases, then the operation and blending has to be reevaluated

k. During the first year of operation the maintenance of the reverse osmosis unit shall be conducted by U.S. Filter.

l. All backwashing shall be manual and conducted by U.S. Filter.

m. All backwashing and reject water shall be discharged directly to a sewer through the approved air gap located immediately south of the slab at the reverse osmosis unit.

n. All chemicals stored or used on-site shall be labeled with their common name such as acid or anti-scalant.

o. If the nitrate concentration in the well changes, then the blending plan has to be reevaluated.

9. Until such time as the additional capacity is needed the facility can be operated by supplying water for both treatment and blending from the 100,000 gallon storage tank if the butterfly valve on the transmission main is closed and treated water and raw water are delivered at the same time to the 500,000 gallon storage tank for mixing.

1. When using well #4, 333 GPM of raw water is sent to the RO treatment unit which produces 250 GPM of treated water which is then blended with 217 GPM of raw water. This produces 467 GPM or 672,480 gallons per day of blended water.

2. When using well #5, 333 GPM of raw water is sent to the RO treatment unit which produces 250 GPM of treated water which is then blended with 176 GPM of raw water. This produces 426 GPM or 613,440 gallons per day of blended water.

3. If wells #4 and #5 are to be blended together, a new blending plan is required.

10. If any additional units is supplied by the water system in the future, the operation and blending and supply shall be reevaluated.

11. Provide a procedure which addresses how Johnson Ranch will conduct public notices if a Maximum Contaminant Level (MCL) for Nitrate or Nitrite occurs. Please include in this procedure, exact time frames to follow, information regarding how the public (specify radio and/or television stations) as well as ADEQ will be notified and the specific information to be supplied in the notices as per A.A.C. R18-4-104 and 105. All analyses required by this approval shall be reported to the Department within 10 days of sampling. All analytical reports related to this blending plan shall be submitted to:

Arizona Department of Environmental Quality
Water Quality Division
Drinking Water Section, Technical Engineering Unit
3033 N. Central Avenue
Phoenix, Arizona 85012

If you have any questions, please contact me at (602) 207-4650.

Sincerely,

Raffi Karamian, E.E.S.
Technical Engineering Unit
Water Quality Division

RK:ce

Enclosure

cc: Central Regional Office
Johnson Utilities
Pinal County Health Department
Facility File #11-128

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull Jacqueline E. Schafer, Director

March 13, 2000

George Johnson
Johnson Utilities
5230 East Shea Blvd.
Scottsdale, AZ 85254

RE: Blending Plan Approval
Johnson Ranch
Public Water System (PWS) #11-128

Dear Mr. Johnson,

This letter is in response to the Engineer's Certificate of Completion forms for ADEQ Project Number 980115 regarding the implementation of a blending plan for the Reverse Osmosis Unit for PWS #11-128 (Johnson Ranch). The purpose of this letter is to inform you that the blending plan submitted for the Johnson Ranch water system, dated March 9, 2000, is approved subject to the following conditions:

1. During the first month of operating the blending plan, weekly monitoring for NITRATE, NITRITE, and the combination of NITRATE/NITRITE shall be conducted from the untreated water (well water/raw water), treated water (directly out of the reverse osmosis unit), and the blended water at the Point of Entry (POE) POE #001 into the distribution system.

2. After a minimum of four (4) weekly NITRATE, NITRITE, and the combination of NITRATE/NITRITE samples have been collected and analyzed, monthly NITRATE, NITRITE, and the combination of NITRATE/NITRITE shall be conducted from the untreated water, treated water and the blended water at POE #001 for the next five (5) months.

3. If after the first six (6) months of operation, analytical results out of the reverse osmosis unit indicate that the nitrate removal efficiency of the reverse osmosis unit is consistent with levels indicated in the submitted blending plan and analytical results from POE #001 are below the maximum contaminant level of 10 mg/l the Department may reduce the monitoring frequency to quarterly.

4. All required NITRATE analyses from POE #001 shall be submitted as compliance samples on analytical forms suitable for entry into the ADEQ Drinking Water database. The NITRATE analyses from the untreated water and the treated water as well as all NITRITE and the combination of NITRATE/NITRITE samples taken directly from the untreated water, treated water and POE #001 shall not be designated as compliance samples.

5. All analyses required by this approval shall be reported to the Department within 10 days of sampling. All analytical reports related to this blending plan shall be submitted to:

   Arizona Department of Environmental Quality
   Water Quality Division
   Drinking Water Section, Technical Engineering Unit
   Attn: Stephanie Koes
   3033 North Central Avenue
   Phoenix, AZ 85012

6. Approval of the blending plan and operation of the reverse osmosis unit is based on the following criteria as submitted.

   - During operation the reverse osmosis unit will remove a minimum of 94% of the nitrates in the untreated water.
   - During operation the maximum level of nitrates in the untreated water may not exceed 19 mg/l.
   - During operation of the reverse osmosis unit a maximum of 217 gpm of untreated water will be fed into the storage tank and mixed with the treated water from the reverse osmosis unit which is fed 333 gpm of untreated water.
   - When the reverse osmosis unit reads high conductivity levels, both the reverse osmosis unit and Well #4 will shut down so the well will not pump directly into the storage tank without treatment.
   - During the first year of operation (March 1, 2000 through February 28, 2001) the maintenance of the reverse osmosis unit shall be conducted by U.S. Filter, as indicated in the signed contract form signed on March 3, 2000.
   - All backwashing shall be manual and conducted by U.S. Filter.
   - All backwashing and reject water shall be discharged directly to a sewer through the approved air gap located immediately south of the slab at the reverse osmosis unit.
   - All chemicals stored or used on-site shall be labeled with their common name such as acid or anti-scalant.

In accordance with Arizona Administrative Code (A.A.C.) R18-4-221.B, should Johnson Ranch wish to adjust any flow rates an amendment to the blending plan shall be submitted and reviewed prior to operation.

In addition to this approved blending plan, please submit a standard operating procedure which addresses how Johnson Ranch will conduct public notices if a Maximum Contaminant Level (MCL) for Nitrate or Nitrite occurs. Please include in this procedure, exact time frames to follow, information regarding how the public (specify radio and/or television stations) as well as ADEQ will be notified and the specific information to be supplied in the notices as per A.A.C. R18-4-104 and 105.

If you have any questions, please contact me at (602) 207-4659 or 1-800-234-5677 ext. 4659.

Sincerely,

Stephanie Koes
Field Engineer
Drinking Water Compliance Section

cc: Brian Tompsett, P.E., The WLB Group, Inc., 333 E. Osborn Ave., Phoenix, AZ 85012
Jerry Beeler, Operator, P.O. Box 114, Chandler Heights, AZ 85227
Patrick Finton, Field Engineer
Facility File #11-128

FAX TRANSMISSION

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER SECTION
3033 NORTH CENTRAL AVENUE
PHOENIX, AZ 85012

To:	George Johnson	**Date:**	March 13, 2000
Fax #:	480-483-7908	**Pages:**	5, including this cover sheet.
From:	Stephanie Koes (602) 207-4659		
Subject:	Reverse Osmosis Unit		

COMMENTS: Approval of Construction for the Reverse Osmosis Unit and Blending Plan provisions attached.

MESSAGE CONFIRMATION

03/13/00 16:16
ID=DEQ 3033 5TH FLOOR CUBE542

DATE	TIME	S.R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
03/13	16:13	01'29"	4804837908	CALLING	05	OK	0000

FAX TRANSMISSION

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
DRINKING WATER SECTION
3033 NORTH CENTRAL AVENUE
PHOENIX, AZ 85012

To:	Brian Tompsett	**Date:**	March 13, 2000
Fax #:	602-279-7810	**Pages:**	5, including this cover sheet.
From:	Stephanie Koes (602) 207-4659		
Subject:	Reverse Osmosis Unit		

COMMENTS: Approval of Construction for the Reverse Osmosis Unit and Blending Plan provisions attached.

MESSAGE CONFIRMATION

03/13/00 16:18
ID=DEQ 3033 5TH FLOOR CUBE542

DATE	TIME	S,R-TIME	DISTANT STATION ID	MODE	PAGES	RESULT	
03/13	16:17	00'57"	6022797810	CALLING	05	OK	0000

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Governor Jane Dee Hull Jacqueline E. Schafer, Director

Water Quality Division

APPROVAL OF CONSTRUCTION

Project Description: New well (ADWR #55-586189), hydropneumatic tank of 5,000 gallons capacity, and water storage tank of 50,000 gallons capacity comprising Edwards Road Water Plant or Johnson Utilities Water Plant No. 2.

Location: Edwards and West Magma Roads, Pinal County

Project Owner: Johnson Utilities
Address: 5230 East Shea Blvd.
Phoenix, Arizona 85253

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above described facility based on the following provisions of the Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On September 20, 2001, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On June 19, 2002, as-built plans, specifications, Engineer's Certificate of Completion, and test results were received by ADEQ.

On June 12, 2002, Brian Tompsett, P.E., certified the following:

- a final construction inspection was conducted on May 10, 2002;
- the referenced project was constructed according to the as-built plans and specifications and ADEQ's Certificate of Approval to Construct.

This Approval of Construction is subject to provision 1 on page two of this Certificate. Be advised that A.A.C. § R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

AH2:jd1

PWS No.: 11-128

ADEQ Project No.: 20010377
LTF No.: 27360

Aolad Hossain, P.E., Manager
Technical Engineering Unit
Drinking Water Section

7/23/02
Date Approved

cc: The WLB Group, Inc.
Pinal County Health Department
Pinal County Planning and Zoning Department
Facility File ADEQ-DWCEU
Project File No.: 20010377, TEU

1. Nitrate shall be monitored at least quarterly as required by Arizona Administrative Code (A.A.C.) R18-4-208.F.

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF APPROVAL TO CONSTRUCT WATER FACILITIES

ADEQ File No: 20010611

System Name: Johnson Util **System Number:** 11128

Project Owner: Johnson Util

Address: 5230 E. Shea Blvd., Ste. 200, Scottsdale , AZ 85254

Project Location: Queen Creek **County :** Pinal

Description: INSTALL THREE NEW WELLS (#55-582085, #55-582087, #55-582088) AND WATERMAINS FROM THE WELLS TO THE OASIS WATER PLANT WATER STORAGE TANK. APPROXIMATELY 100 L.F. OF 12" WATERLINE, 3,550 L.F. OF 8" WATERLINE AND 650 L.F. OF 6" WATERLINE.

Approval to construct the above-described facilities as represented in the approved documents on file with the Arizona Department of Environmental Quality is hereby given subject to provisions 1 through 11 continued on page 2 through 2

1. This project must be constructed in accordance with all applicable laws, including Title 49, Chapter 2, Article 9 of the Arizona Revised Statutes and Title 18, Chapter 4, Article 5 of the Arizona Administrative Code.
2. Upon completion of construction, the engineer shall fill out the Engineer's Certificate of Completion and forward it to the Central Regional Office located in Phoenix. If all requirements have been completed, that unit will issue a Certificate of Approval of Construction. R18-4-507(B), Ariz. Admin.Code. At the project owner's request, the Department **may** conduct the final inspection required pursuant to R18-4-507(B); such a request must be made in writing in accordance with the time requirements of R18-4-507(C), Ariz. Admin. Code.
3. This certificate will be void if construction has not started within one year after the Certificate of Approval to Construct is issued, there is a halt in construction of more than one year, or construction is not completed within three years of the approval date. Upon receipt of a written request for an extension of time, the Department may grant an extension of time; an extension of time must be in writing. R18-4-505(E), Ariz. Admin. Code.
4. Operation of a newly constructed facility shall not begin until a Certificate of Approval of Construction has been issued by the Department. R18-4-507(A), Ariz. Admin. Code.

Reviewed by KNS

By: _____ 8/7/03
Aolad Hossain., P.E., Manager Date
Technical Engineering Unit
Water Quality Division

cc: File No : 20010611
Regional Office: Central
Owner: Johnson Util
County Health Department: Pinal
Engineer: Wlb Group
Planning and Zoning/Az Corp. Commission
Engineering Review Database - Etr021

5. Microbiological analysis report for each well shall be submitted before Approval of Construction can be issued.

6. Well construction shall conform with DWR regulations.

7. Well grout seal must be at least 20 feet.

8. Well setbacks shall be in accordance with A.A.C. R18-4-502.D.

9. All materials and products used in the drinking water system shall conform to NSF Standard 61.

10. Construction materials used in the water system shall be lead free as defined at R18-4-504 and R18-1-101.

11. Water lines shall be pressure and leakage tested in accordance with AWWA C605 Standard.

Jane Dee Hull
Governor

ARIZONA DEPARTMENT
OF
ENVIRONMENTAL QUALITY

1110 W. Washington Street Phoenix, Arizona 85007
(602) 771-2300 • www.adeq.state.az.us

APPROVAL OF CONSTRUCTION

Project Description: Installation of three new wells (#55-582085, #55-582087, #55-582088) and water mains from the wells to the Oasis Water Plant water storage tank. Approximately 25 L.F. of 12" waterline; 4,153 L.F. of 8" waterline, 89 L.F. of 6" waterline, and 74 L.F. of 4" waterline.

Location: Queen Creek

Project Owner: Johnson Utility Co.
Address: 5230 E. Shea Blvd. Ste. 200
Scottsdale, AZ 85254

The Arizona Department of Environmental Quality (ADEQ) hereby issues an Approval of Construction for the above-described facility based on the following provisions of Arizona Administrative Code (A.A.C.) R18-4-507 et seq.

On August 7, 2002, ADEQ issued a Certificate of Approval to Construct for the referenced project.

On October 11, 2002, Brian Tompsett, P.E., certified the following:

- a final construction inspection was conducted on October 8, 2002;
- the referenced project was constructed according to the as-built plans and specifications sealed on October 11, 2002 and ADEQ's Certificate of Approval to Construct;
- water system pressure and leakage tests were conducted on August 19, 2002 and the results were within the allowable leakage rates; and
- the water distribution system was disinfected according to an ADEQ-approved method.

Microbiological samples were collected on June 28, 2002 and August 21, 2002 and analyzed on June 29, 2002 and August 22, 2002, by Statewide Disinfection Service, ADHS License No. AZ0637 and by Aquatic Consulting & Testing, Inc., ADHS License NO. AZ0003. The sample results were negative for total coliform.

This Approval of Construction authorizes the owner to begin operating the above-described facilities as represented in the approved plan on file with the ADEQ. Be advised that A.A.C. R18-4-124 requires the owner of a public water system to maintain and operate all water production, treatment and distribution facilities in accordance with ADEQ Safe Drinking Water Rules.

AH:KNS

PWS No.:11-128

ADEQ Project No.:20010611
LTF No.:28269

Aolad Hossain, P.E., Manager
Technical Engineering Unit
Drinking Water Section

12/13/02.
Date Approved

c: DWCEU Facility File
TEU Construction File
CRO Approval of Construction File
Pinal County Health Department
Pinal County Planning & Zoning Department
AZ Corporation Commission
Engineer

SUPPLEMENTAL INFORMATION

E

SUPPLEMENTAL INFORMATION

E

Johnson Utilities
Docket No. WS-02987A-04-0288

Calculate water needed on peak day. Assume ratio of average monthly day to peak monthly day is 1.25.

Use gallons sold from original water use data sheet submitted to ACC. From Water Use Data Sheet, peak month/service usage was June 2004.

$$\text{Demand} = \frac{(81{,}447{,}892 \text{ gal})(\text{month})\ (1.25 \text{ peak})}{(\text{month})\quad (30 \text{ days})(6372 \text{ customers})}$$

Demand = 532.6 gal/day-service on peak day or
426 gal/day-service daily average during peak month

As an alternative, use gallons billed from water use summary in March 29th data request.

$$\text{Demand} = \frac{(95{,}627{,}599 \text{ gal})(\text{bill period})\ (1.25 \text{ peak})}{(\text{bill period})\quad (36 \text{ days})(6372 \text{ customers})}$$

Demand = 521 gal/day-service on peak day or
417 gal/day-service daily average during peak month

Calculate demand on peak day based on present customer base (8508). Use March 29th data.

$$\text{Demand} = \frac{521 \text{ gal}\quad (8508 \text{ services})}{(\text{day-service})} = 4{,}432{,}668 \text{ gallons/day}$$

or
3,078 gal/min

2,464 gal/min needed for daily average during peak month

Total well production is 2870 gal/min - not enough for peak day.

Calculate monthly growth rate during past year (12 months).

$4086\ (1 + \text{growth rate})^{12} = 8508$

$$1 + \text{growth rate} = e^{(1/12 \ln (8605/4086))} = 1.063$$

rate = 6 % per month

Calculate new well production needed summer of 2005 based on 6%/month growth rate, and 521 gal/day-service on peak day in June.

	Customers For month ending	Water Demand, peak day in June 2005 (gal/min)
Dec 2004	8508	3,078
Jan 2005	9018	3,262
Feb 2005	9560	3,459
Mar 2005	10133	3,666
Apr 2005	10741	3,886
May 2005	11386	4,119
Jun 2005	12069	4,367

Calculate needed well production in summer of 2005 based on projected growth

$$Q = \frac{12069 \text{ services } (521 \text{ gal})}{\text{day-service}} = 6{,}287{,}940 \text{ gal/day}$$

or

4,367 gal/min on peak day, or

3,495 gal/min daily average during peak month.